

CLAIMS

1. An information recording and reproduction apparatus which records and reproduces information by irradiating a laser light onto a recording medium, comprising:
- a light source which emits the laser light;
 - a driving signal generating unit which generates a laser driving signal having a recording power level corresponding to recording data or a reproduction power level;
 - a high frequency superimposing unit which superimposes a high frequency signal on the laser driving signal; and
 - a control unit which drives the light source by the laser driving signal on which the high frequency signal is superimposed to perform recording and reproduction,
- wherein a level of the high frequency signal at a time of recording is different from the level of the high frequency signal at a time of reproduction.
2. The information recording and reproduction apparatus according to claim 1, wherein the level of the high frequency signal at the time of the recording is smaller than the level of the high frequency signal at the time of the reproduction.
3. The information recording and reproduction apparatus according to claim 1, wherein the level of the high frequency signal at the time of the reproduction is equal to or larger than 5mWpp when the recording medium is a DVD, and the level of the high frequency signal at the time of the recording is equal to or smaller than 4mWpp when the recording medium is a DVD-R/RW.
4. The information recording and reproduction apparatus according to claim 1, wherein the high frequency superimposing unit changes the level of the high frequency signal at a timing a predetermined time period before transition of the control unit from a reproduction state to a recording state.
5. The information recording and reproduction apparatus according to claim 4, wherein the predetermined time period is longer than a time period necessary for a transient response of a waveform of the laser light by change of the level of the high frequency signal to stabilize.

5 6. An information recording and reproduction
method which records and reproduces information by
irradiating a laser light onto a recording medium,
comprising:
 a driving signal generating process which
generates a laser driving signal having a recording
power level corresponding to recording data or a
reproduction power level;
10 a high frequency superimposing process which
superimposes a high frequency signal on the laser
driving signal; and
 a control process which drives a light source
by the laser driving signal on which the high
15 frequency signal is superimposed to perform recording
and reproduction,
 wherein a level of the high frequency signal at
a time of recording is different from the level of the
high frequency signal at a time of reproduction.
20

 7. An information recording and reproduction
program which is executed in an information recording
and reproduction apparatus recording and reproducing
information by irradiating a laser light onto a
25 recording medium, making the information recording and
reproduction apparatus function as:
 a driving signal generating unit which
generates a laser driving signal having a recording
power level corresponding to recording data or a
30 reproduction power level;
 a high frequency superimposing unit which
superimposes a high frequency signal on the laser
driving signal; and
 a control unit which drives a light source by
35 the laser driving signal on which the high frequency
signal is superimposed to perform recording and
reproduction,
 wherein a level of the high frequency signal at
a time of recording is different from the level of the
40 high frequency signal at a time of reproduction.